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New center at AFRL Information Directorate

by Fran Crumb, Information Directorate

ROME, N.Y. — The Air Force Research Laboratory (AFRL) Information Directorate recently conducted a colloquium to inaugurate the Center of Excellence for Integrated Transmission and Exploitation (CITE).

CITE is a joint endeavor of the Information Directorate and the Air Force Office of Scientific Research (AFOSR) that will focus on basic and applied research in the science and engineering of integrated transmission and exploitation.

“Current information technology cannot form a common operating picture for decision-makers and does not allow the sharing of information with coalition partners,” said Bruce W. Suter of the directorate’s Information Grid Division and director of CITE.

“The Department of Defense report to Congress following the Kosovo operation highlighted limited military performance against ‘difficult targets’,” said Suter. “The report also identified limitations in the capability for combat identification and for reaching deep beyond enemy lines.”

CITE’s vision is development of technology that will enable interconnected and geographically separated decision-makers the capability to access real-time intelligence, surveillance and reconnaissance information and conduct command and control operations via a “Global Grid.”

“Current data transmission and exploitation systems are unable to reconfigure and adapt resources on demand,” said Suter. “They are also unable to extract and process information dynamically tailored to a given situation or to access and disseminate information in a timely manner. CITE hopes to provide a systems approach to solving those shortfalls.”

Marlan Scully, chaired professor in both physics and electrical engineering at Texas A&M University, offered a view of future advances in information technology during his keynote speech to the colloquium: “Current Activities and Future Trends in Quantum Information Technology.”

Those future advances could include quantum computers that exploit the laws of quantum mechanics governing the behavior of matter at the atomic level and capable of storing more numbers than there are atoms in the universe.

He also discussed recent experiments that have shown light pulses can be slowed to speeds on only meters per second in certain quantum materials – a finding that holds further potential for advances in electronics and information science. @